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119077.01 TELEPRESENCE T3 ROOM INSTALLATION GUIDE 12.08

TANDBERG T3 Telepresence provides a highly immersive total Telepresence solution designed in great detail to create an experience where meeting participants from around the globe have the sensation that they are sitting across the table engaging in a face to face conversation.

The orchestration of the room environment is a critical element of creating the "illusion of being there" that is at the heart of the Telepresence experience. TANDBERG's immersive room package creates a total Telepresence environment with specialized lighting, acoustics, and furnishings delivering a warm and inviting atmosphere with superior visual and audio quality.

The following pertains to the architectural specifications required for the implementation of Immersive and non-Immersive Telepresence T3 rooms.

These specifications are to be used as a guide for the design and implementation of a Telepresence T3 room. Failure to follow the guidelines below will produce a less than optimal Telepresence experience.

It should be noted that for the majority of T3 installations with the proper room dimensions, only certain room modifications need to be made. TANDBERG and its partners will work closely with the customer to accommodate any special requests or modifications.

We strongly recommend that you follow the sequence outlined in this document.

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TANDBERG Telepresence T3

Included in the TANDBERG Immersive Room Package:

- Glass wall accessories T3
- Glass walls T3
- LED lights T3
- Walnut wall panels T3
- Walnut wall panel corners T3
- Walnut wall panel profiles T3
- Main lighting T3

Not included in the TANDBERG Immersive Room Package:

- Wall lattice construction materials
- Entrance door
- Rockwool or similar insulation material

Special tools required:

- Saw for gypsum with integrated dust extration

Suggested Workflow

Preparing your room:

- Electricity 2 days
- HVAC 3 days
- Walls w/wooden structure 1 week
- Ceiling 1 day

TANDBERG Immersive Room:

- Glass panels 1 day
- Wood panels 2-3 days
- Carpet 1 day
- Lighting 2 days

Right: Defining the terms **depth**, **width** and **height**. Note that room dimensions refer to an empty room **before** T3 specific walls and ceiling have been mounted.

Tip! More on room size can be found in the document **TANDBERG Telepresence T3 Room Requirements**.

ROOM INSTALLATION GUIDE PLANNING AND INITIAL STEPS

We strongly recommend that you start your planning with a meeting. Make sure you include all the people needed:

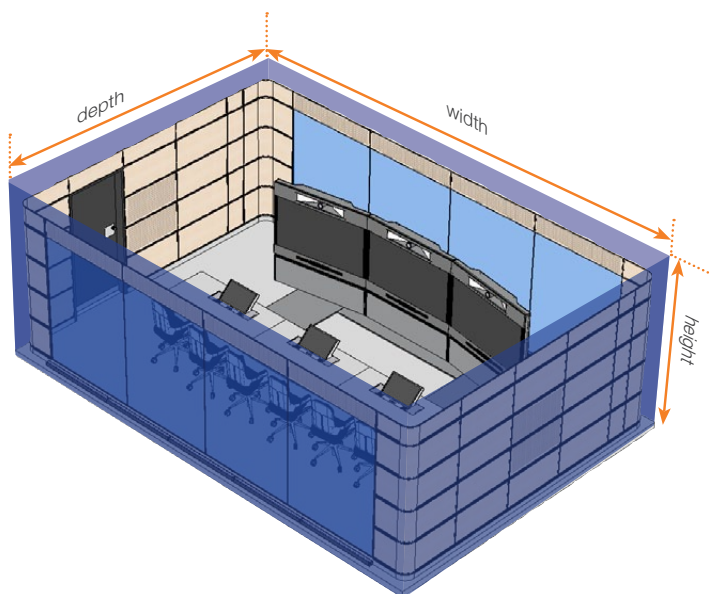
- Project manager and assistant(s)
- Carpenters, painters, electricians, mechanical engineer
- HVAC (heating, ventilation, air conditioning) specialists
- IT personnel
- Architect

It is of vital importance that all parties agree on who is going to do what and when, before you start the installing the system.

CHECKLIST BEFORE TANDBERG INSTALLATION

ROOM SIZE

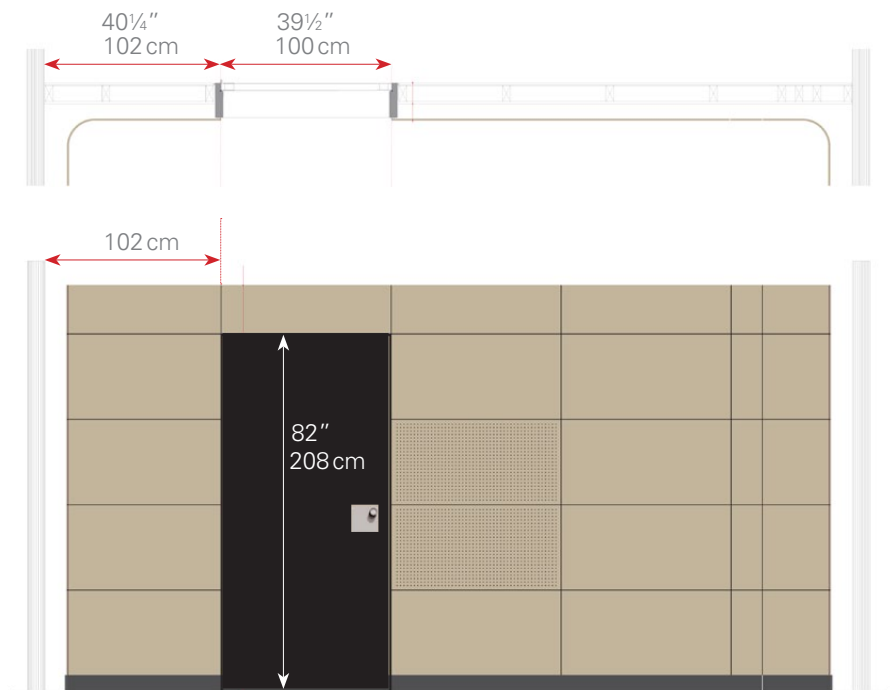
	Room Dimensions without second row		Room Dimensions with second row		
	depth	width	depth	width	height
Minimum	410 cm 14' 5½"	675 cm 22' 2"	438 cm 14' 4½"	675 cm 22' 2"	211 cm 6' 11"
Optimal / Maximum	466 cm 15' 3½"	720 cm 23' 7"	508 cm 16' 8"	720 cm 23' 7"	245 cm 8'



ROOM INSTALLATION GUIDE PLANNING AND INITIAL STEPS

The door is **not** a part of the TANDBERG Immersive Room package. The door opening should fit a 100 cm door. The door should open outwards.

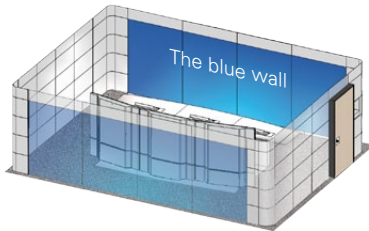
Light opening for door: 100 cm × 208 cm



Door should be painted black.
The door should be mounted
flush on the outside.

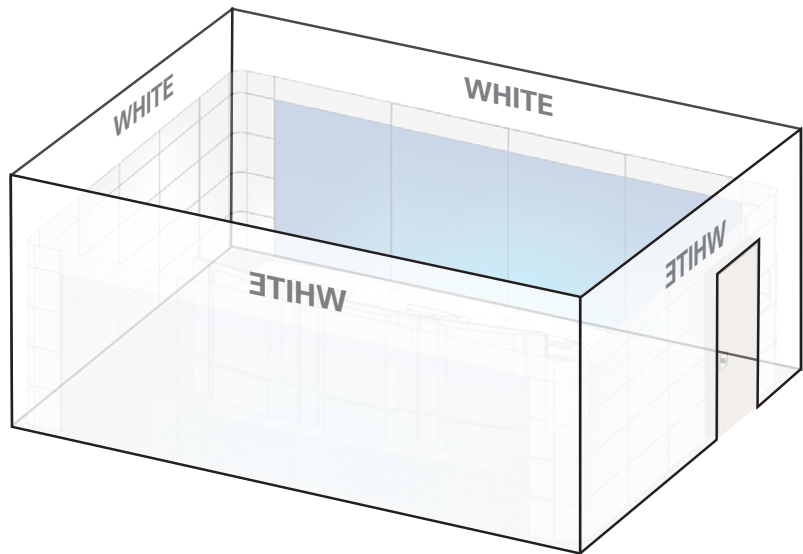
You may want to consult the document **Room Requirements** for the requirements on:

- Heating, ventilation and air-conditioning
- Electrical Outputs
- LAN Outputs
- Ceiling



WALL FINISH

- All 4 walls should be painted white.
- The finish should be flat and without holes, but need not be totally perfect.
- Make sure there are no cables visible behind the blue wall.
- No holes must be made higher up and no wall outlets must be mounted higher up than 10 cm (4") above the floor.



Before the panels can be mounted, you need to set up the wall lattice construction. Note that the materials for this and Rockwool (or similar) insulation material must be sourced locally.

Note! These items are not included. Suitable material should be sourced locally.

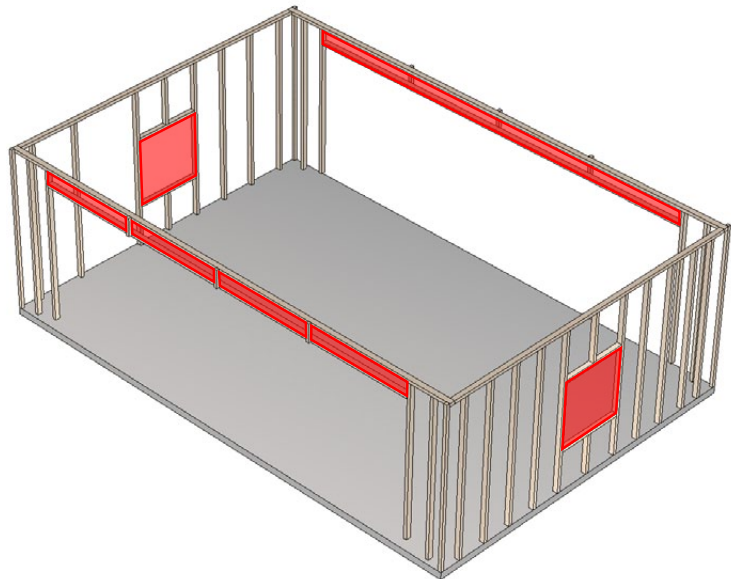
Observe the following:

- The vertical studs must **not** go all the way up to the ceiling. They must stop at the highest horizontal cross member.
- The light opening for the blue glass, centered on the two long walls, is 593.5 cm × 208.5 cm / 19'5²/₃₂" × 6'10³/₃₂".

Note that these dimensions are critical dimensions needed for perfect fitting of the glass panels!

- The upper cross members must not let light through, i.e. there must be no gap between the white walls and the inner surface of the cross members (where the walnut panels shall be attached).

Note that failure to do so will cause visible stripes of light on the white walls above the glass panels.



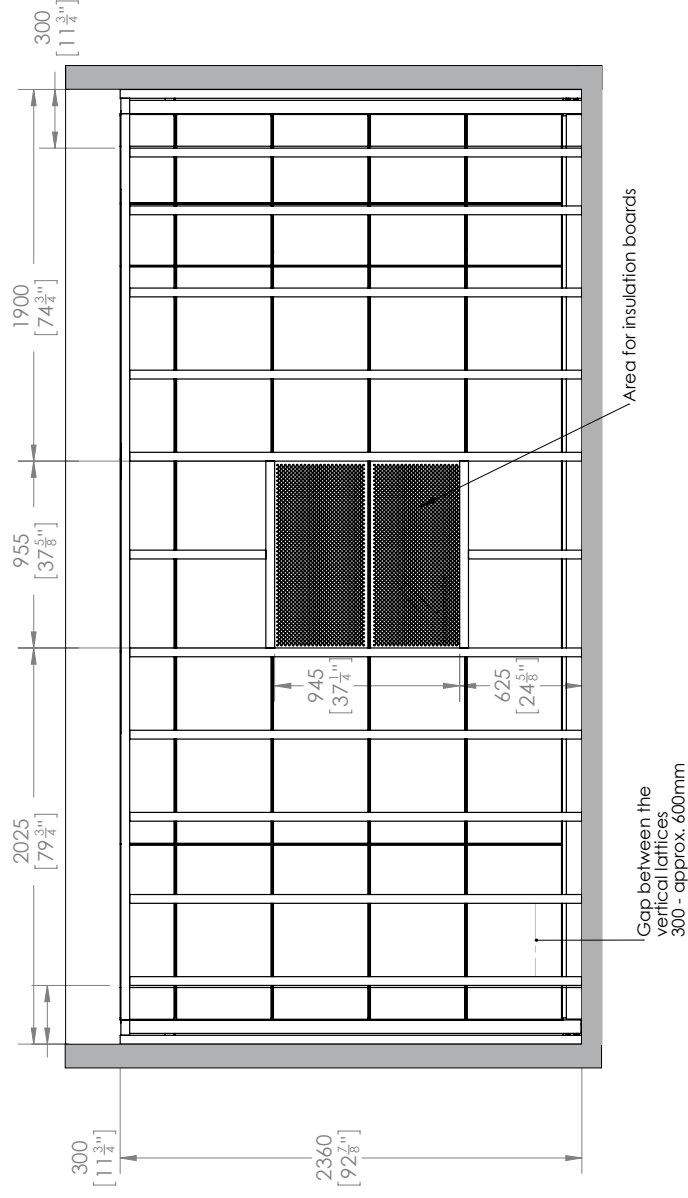
- The distance from the front of the wall panels/glass wall, to the inner wall must be:

14 cm (5 1/2") in the front and rear

8.5 cm (3 1/4") in the sides

These distances are due to the need for sufficient space for the LED lights behind the blue glass walls and for sufficient space for the acoustic perforated panels on the side walls.

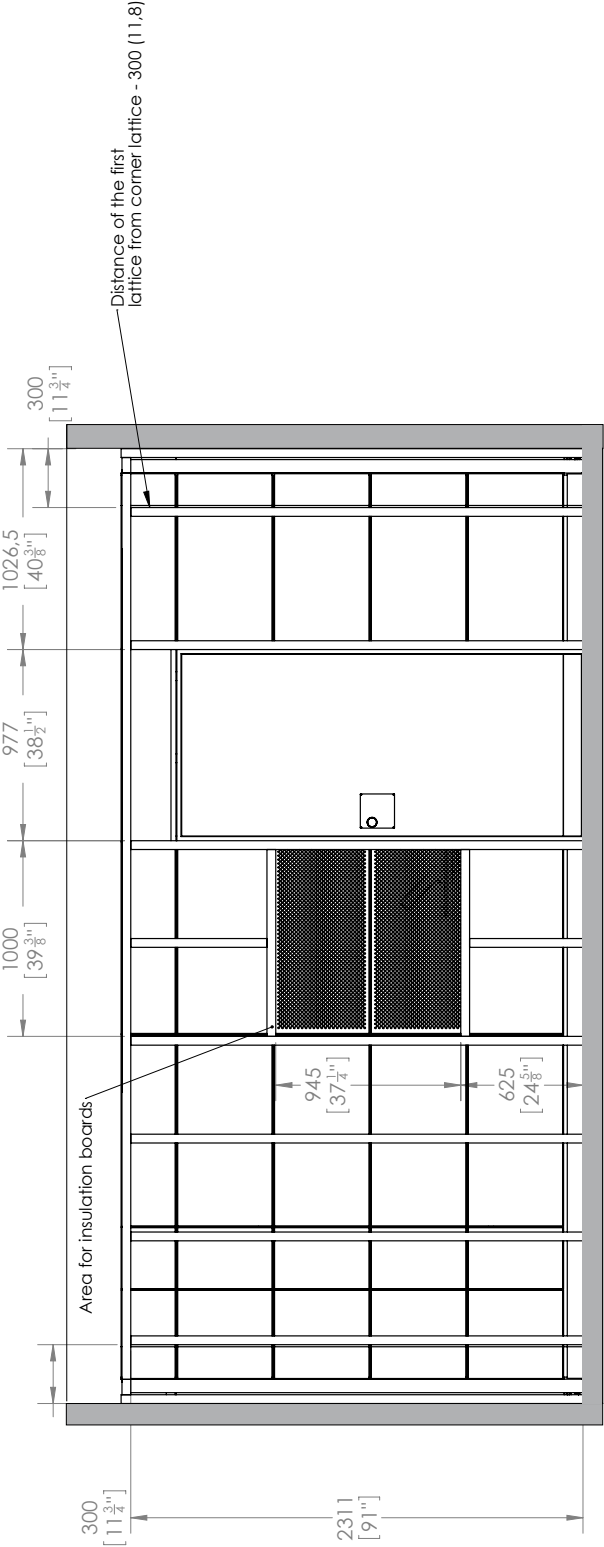
Build a lattice structure as shown above and on the following pages and put Rockwool in the areas marked with red. This is where the acoustic perforated panels are to be mounted.



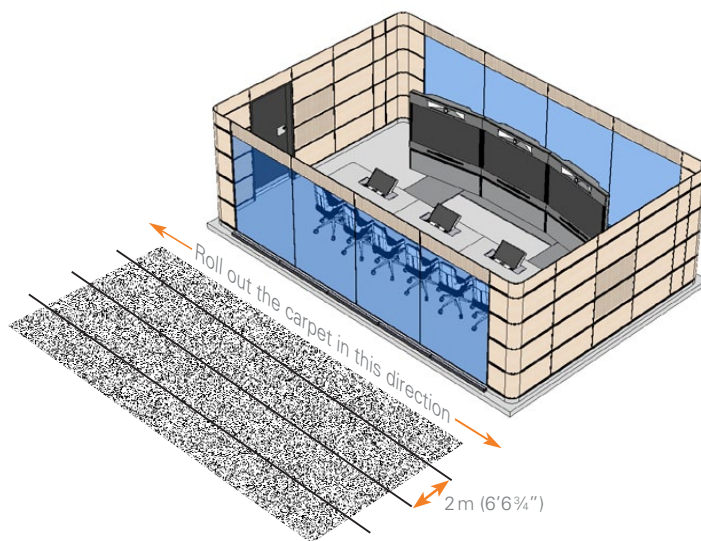
Tip! Some rooms have floors that are not entirely level. This means that the height to the ceiling may vary about the room.

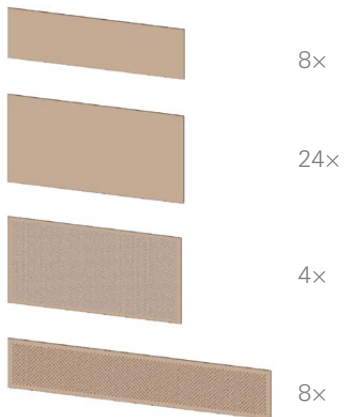
When taking measurements of the room always use the lowermost point of the floor as your reference plane.

This may force you to cut the baseboard somewhat in some places, but the result will look far better than if the baseboard fails to go all the way down to the floor.

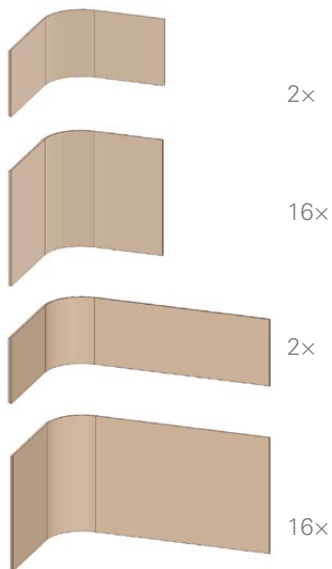


Note! The carpet is supplied in a single roll and must be cut to measure. Roll width is 2 m (6'6¾"). Roll out and cut the carpet as indicated below. Cut as many lengths as required. Make sure glue is applied to the entire floor surface.





These elements are located in the box marked **Walnut wall panels T3**.



These elements are located in the box marked **Walnut wall panel corners T3**.

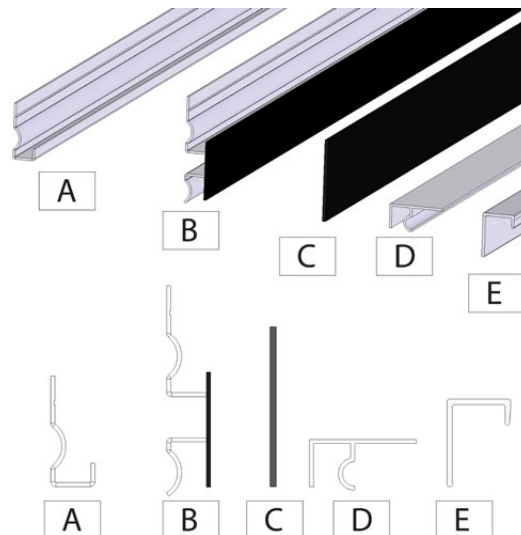
Note! These items are included in the Immersive Room Package.

What to unpack: Unpack the three boxes marked

- Walnut wall panels T3
- Walnut wall panel corners T3
- Walnut wall panel Profiles T3

Box contents:

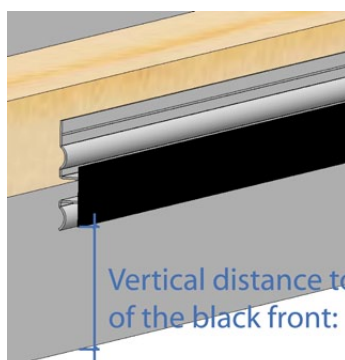
- The box marked **Walnut wall panels T3** contains aluminum baseboards (not shown), in addition to the items shown to the upper left.
- The box marked **Walnut wall panels corners T3** contains corner baseboards (not shown), in addition shown to the lower left.
- The box marked **Walnut wall panels Profiles T3** contains border lists, in addition to the following five kinds of profiles:



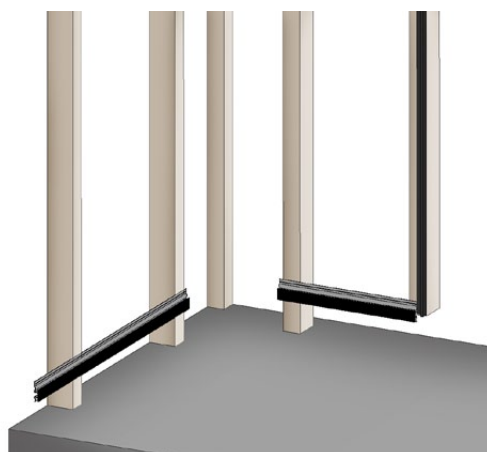
Note! It is of utmost importance that you mount the corners first.

Do as follows:

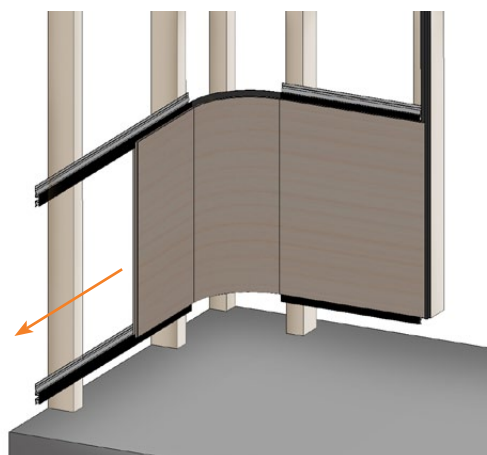
1. Start at the bottom and build your way up.
2. Fasten the profile E vertically on the lattice next to the glass walls (it will be the border between the wooden panels and the glass walls).
3. Continue by cutting the profile B in appropriate lengths (from the edge of the corner profile to the radius).



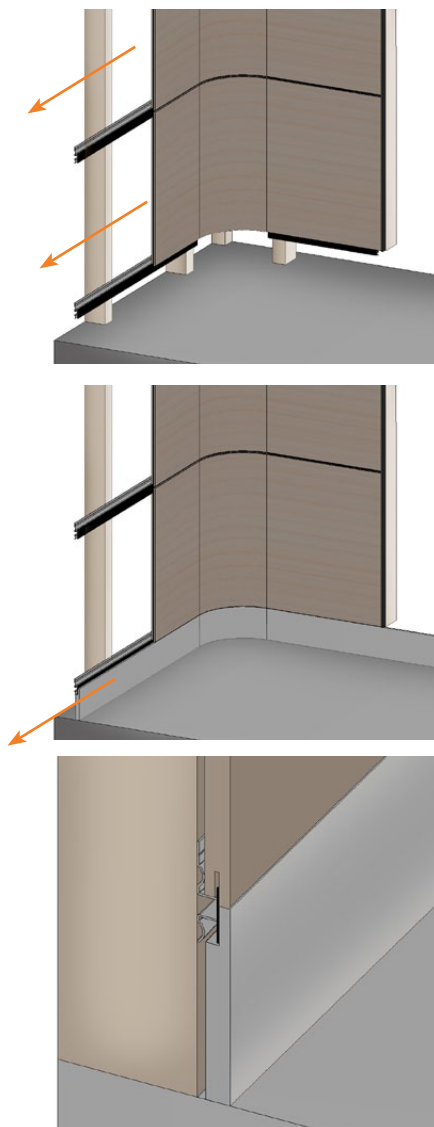
Vertical distance to floor from bottom surface
of the black front: 8,9cm=3 1/2"

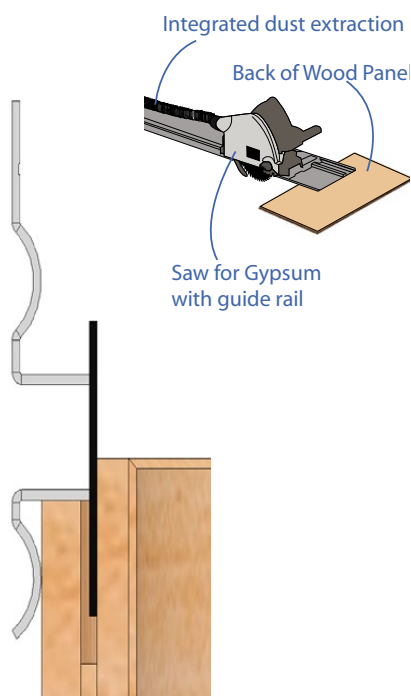


4. Insert and bend profile C in the slotted curve.



5. Place the wooden panel in correct level and perpendicular position.





How the profiles should fit.



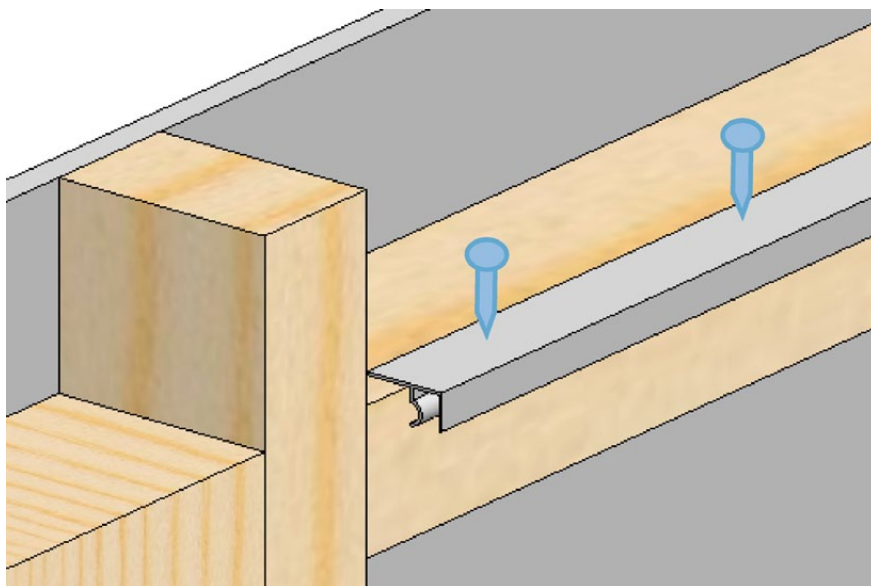
The top panel with profile D as seen from the back

6. The profiles shall fit as shown to the left.

Should you need to adjust the length of any of the panels, it is important to use the right tools.

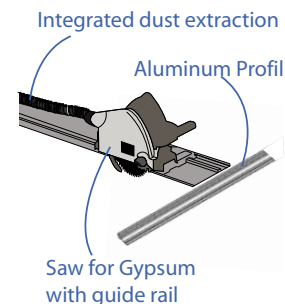
Note! Be sure to cut the panels with the **backside** up, in order to minimize the risk of damaging the front of the panels. Observe how dimensions are presented (page 6 of this document)

7. The profile D is to be used at the top of the topmost panel. Fasten with screws to the top lattice.

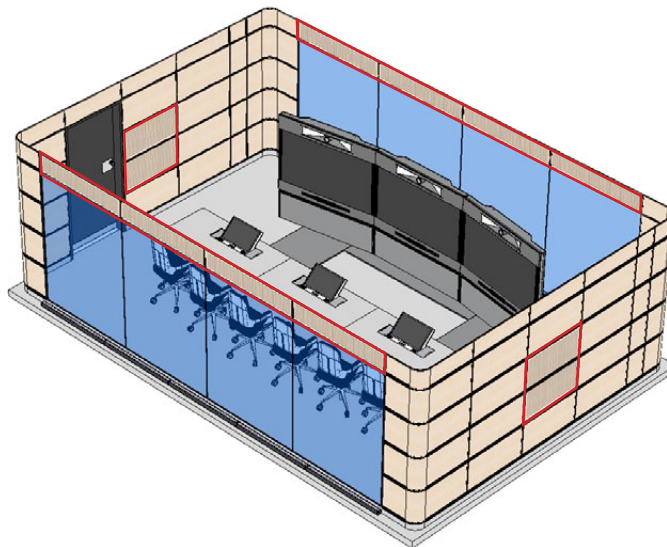


The top panel with profile D as seen from the back is shown to the left.

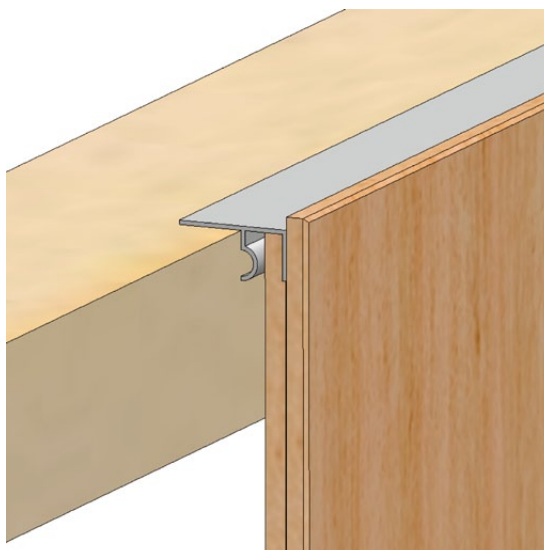
8. Insert black aluminum trim pieces vertically between adjacent panels. These are not precut and must be cut to fit from aluminum stock.



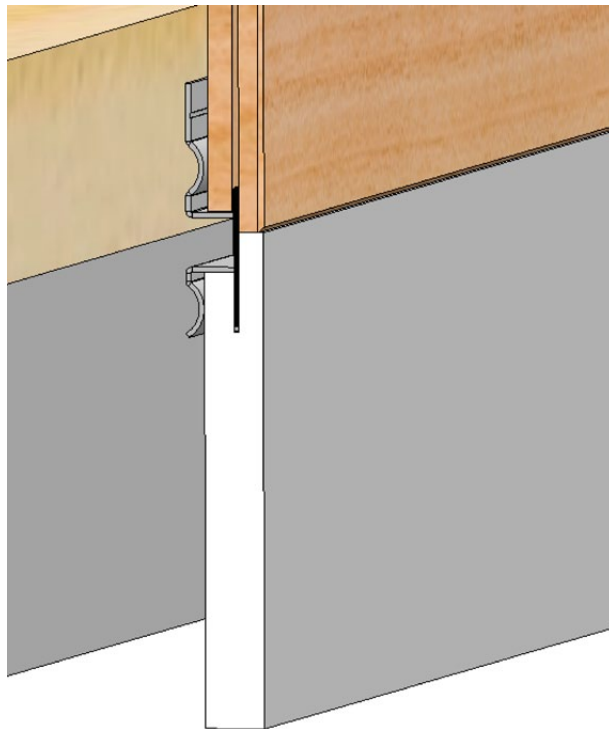
9. The red areas in the illustration represent the perforated acoustic panels.



The panels situated above the glass walls are to be mounted with the Profile D, both at the top and bottom of the panel.



- Mount the aluminum baseboards to the lowest profile B around the whole room. The front of the baseboards shall be aligned with the front of the panels.

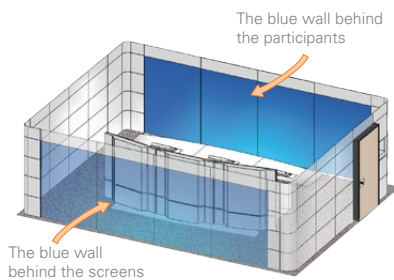


Tip: Wear gloves at all times when handling the glass plates.

Caution! The glass panels should be handled by authorized personnel only.

Caution! Glass plates should always be stored in upright position.

Caution! The weight of the entire glass plate should never rest on just one corner.



There are two blue walls altogether, one behind the participants and one behind the screens.

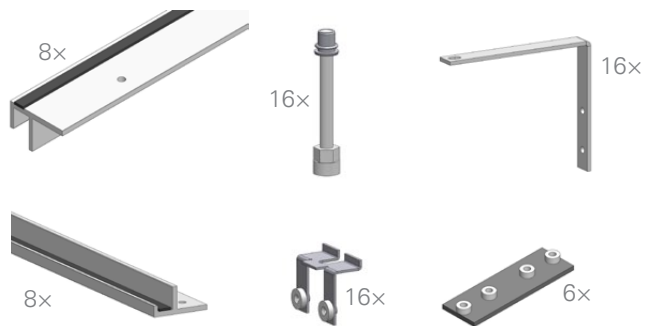
Note! These items are included in the Immersive Room Package.

What to unpack: Unpack the two boxes marked

- Glass wall Accessories T3
- Glass walls T3

Box contents:

- The box marked **Glass wall Accessories T3** contains the following items:



- The box marked **Glass walls T3** contains the following items:

8 glass panels, each consisting of 9 mm ($\frac{5}{16}$ ") glass, with the dimensions of 1964 mm x 1480 mm and with a weight of 65 kg or 142 lbs. per panel.

The glass walls are to be mounted with aluminum profiles, fastened with brackets, joint brackets and adjusting screws and nuts. Brackets are fastened with M5 screws.

Do as follows:

1. Mount the upper profiles to the lattice.



Tip: Wear gloves at all times when handling the glass plates.

Caution! The glass panels should be handled by authorized personnel only.

Caution! Glass plates should always be stored in upright position.

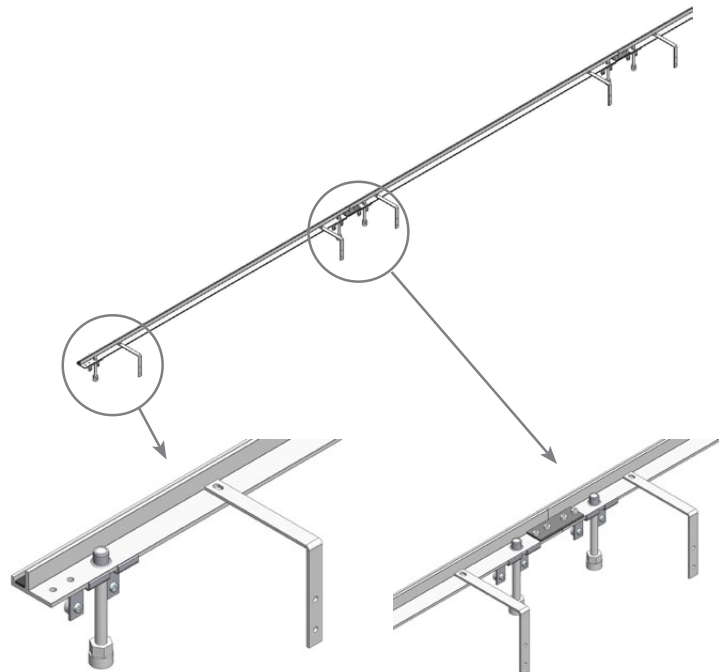
Caution! The weight of the entire glass plate should never rest on just one corner.

Note! It is paramount that the distance between the profiles is 7–8 mm (¼") more than the glass panel length (height when mounted). Otherwise you will not be able to mount the panels.

2. Adjust so that the glass profile is flush with the vertical black side profile (the one closest to the panels). Mount the angle bracket onto the lower glass profile (drill a hole for the M5 screw in the glass profile). This should fix the distance between the wall and the glass profile.



3. Measure the distance between the upper and the lower profiles. Adjust the distance between the profiles to 1972 mm by adjusting the feet.
4. Use screws to attach the angle brackets to the wall. The glass profiles should now be fixed.
5. Repeat 2–4 and mount the joint brackets until all are mounted.



Tip! You may want to mount the LED lights before you mount the glass panels. Although strictly not needed to do so, you may find it convenient. LED mounting is described after this section.

Tip: Wear gloves at all times when handling the glass plates.

Caution! The glass panels should be handled by authorized personnel only.

Caution! Glass plates should always be stored in upright position.

Caution! The weight of the entire glass plate should never rest on just one corner.

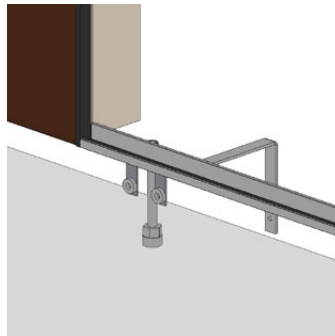
6. Carefully unpack the glass walls. Wipe the glass clean if needed. Wear gloves at all times to avoid leaving marks on the panels. Glass plates must be stored in an upright position.

IMPORTANT! The weight of the glass plate should never rest on just one corner.

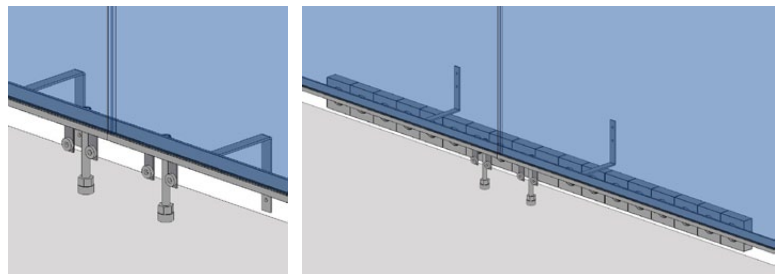
Note! The glass plates should be mounted with the matte side inwards (into the room).

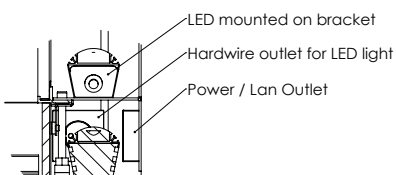
7. Use the enclosed tape and mount it along the top and bottom edges of the glass panel. There may be tape visible along the bottom edge after the mounting. Careful alignment of the tape along the bottom edge will minimize this. You may also use a sharp knife and carefully cut and remove the excess tape after the panels have been mounted.
8. Mount two rubber bumpers on what will be the right edge (when mounted) of the left glass panel. Take care to position these so that they will become covered by the profiles holding the panel in position. The rubber bumpers serve to prevent the glass panels from touching each other.

Placing the glass walls requires a minimum of two persons. Place the glass walls in the profiles by lifting the glass so that the top of the glass touches the surface of the top profile. Then slowly sink the glass into the groove of the bottom profile.



9. Repeat the rubber bumper mounting for the center panel. Put the second glass in place as close to the first panel as possible.





Note! These items are included in the Immersive Room Package.

Note! Lamps must be installed by qualified personnel only. Local regulations and requirements may apply.

What to unpack: Unpack the box marked

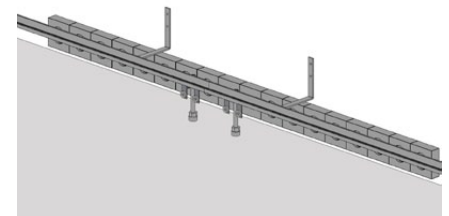
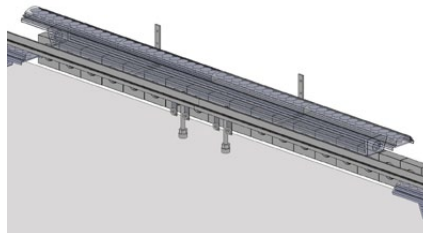
- LED lights T3.

Box contents:

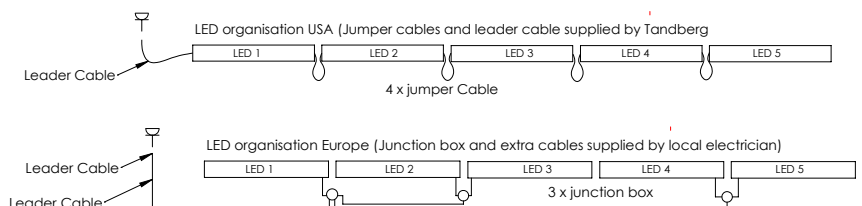
- This box contains the 10 × Phillips BCS722 LED light modules.
US version:
10 × eW Grace Powercore
2 × Leader Cable
8 × Jumper Cable

Kindly observe the following:

- Installation of Phillips LED lighting can begin as soon as the installation of the blue backlighting walls is complete.
- Each blue wall contains 5 LED lights placed end to end on the floor
- 5 LED lights should be connected in series behind each blue wall.
- LED light coupling: 2 double and 1 single.



Place Center LED light on top of brackets for glass fixture. This applies to the blue wall behind the system only.



Note! These items are included in the Immersive Room Package.

What to unpack: Unpack the box marked

- Main Lighting T3

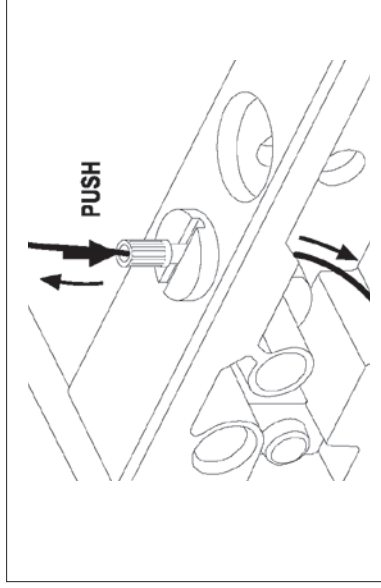
Box contents:

- The box contains 6 Fluorescent lightbulbs
US: 21W 830
EU: 39W 830
11 35W Halogen lightbulbs.

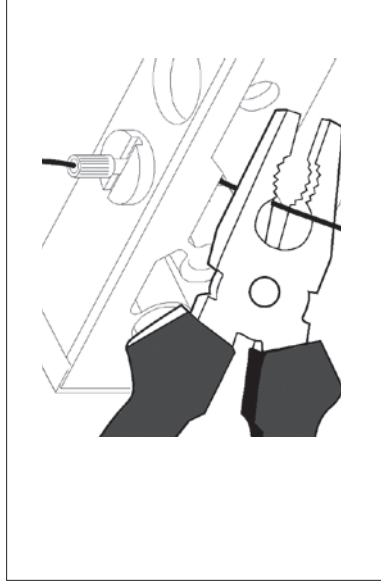
The rear ceiling lighting consists of seven 640mm spot light armatures mechanically fastened together and parallel wired together. (Rear edge 5 cm / 2" inner rear wall and 228 cm / 7' 5¾" from the floor.)

The front ceiling lighting consists of four 450mm spot light armatures plus three fluorescent light armatures mechanically fastened together and parallel wired together. (Rear edge 200 cm / 6' 6⅞" from inner rear wall and bottom edge 228 cm / 7' 5¾" from the floor).

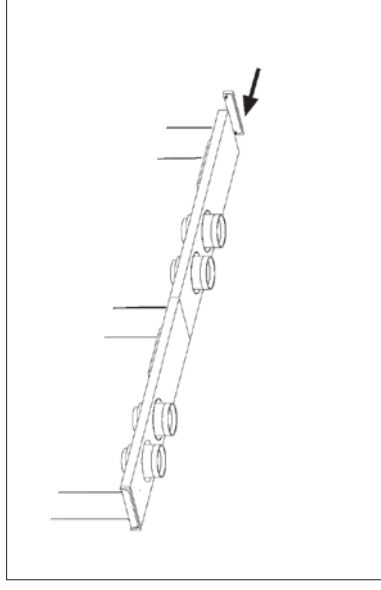
Ceiling attachment by means of hang wires provided with lighting. Anchor method in ceiling will depend on ceiling structure and composition.



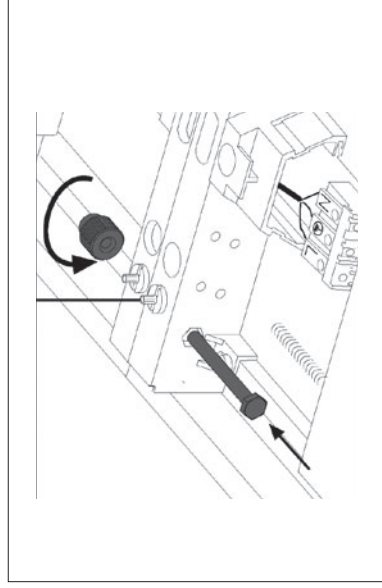
Thread hang wires through push fasteners.



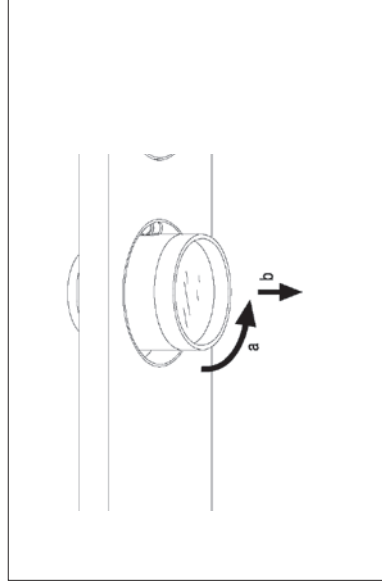
Trim off excess wire to approximately 8cm / 3"



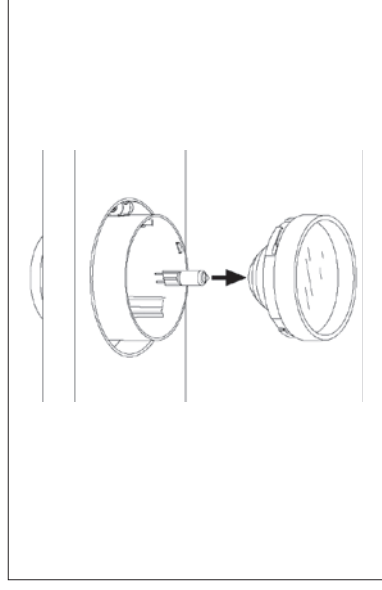
Press in the chrome colored end plates to cap off each row of lights.



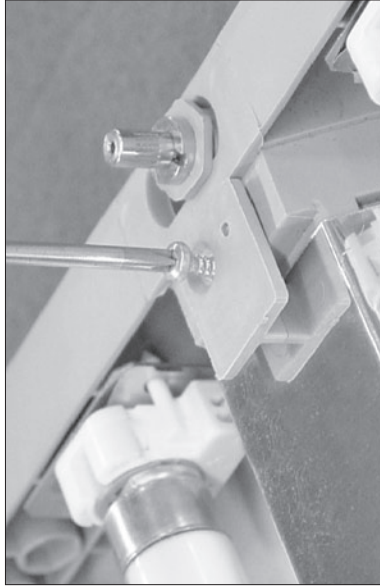
Use the provided 4mm bolts ad plastic nuts to fasten the seven lights together in one continuous row.



Unscrew the light bezel.



Insert light bulb. Reinstall light bezel.



Remove screw, plastic retainer and alloy protective guard for wiring access.



Remove screw, plastic retainer and alloy protective guard for wiring access.



Remove the five wire factory installed lead from the fluorescent light armature. (This is only used with dimming) Use a 20cm piece of the three wire lead to couple the adjacent spot/fluorescentlights together. There should be many extra meters of the three wire leads from the spotlights after they are clipped to the correct length.



Blue=N
Green=GND
Brown=L

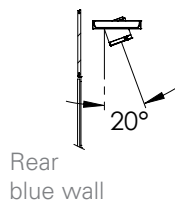
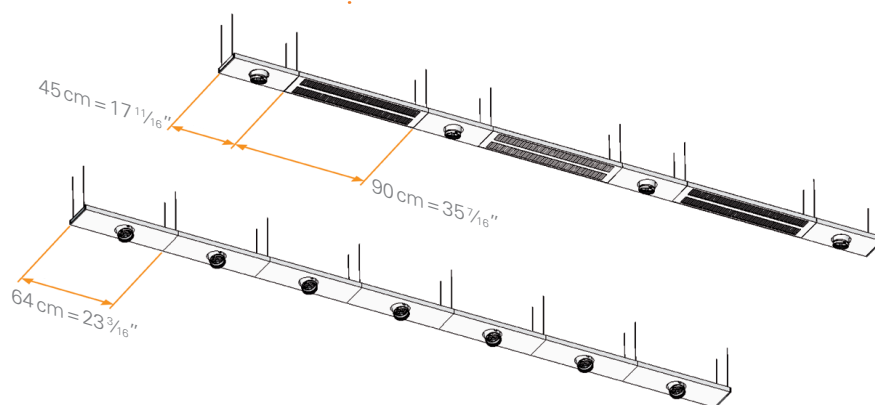
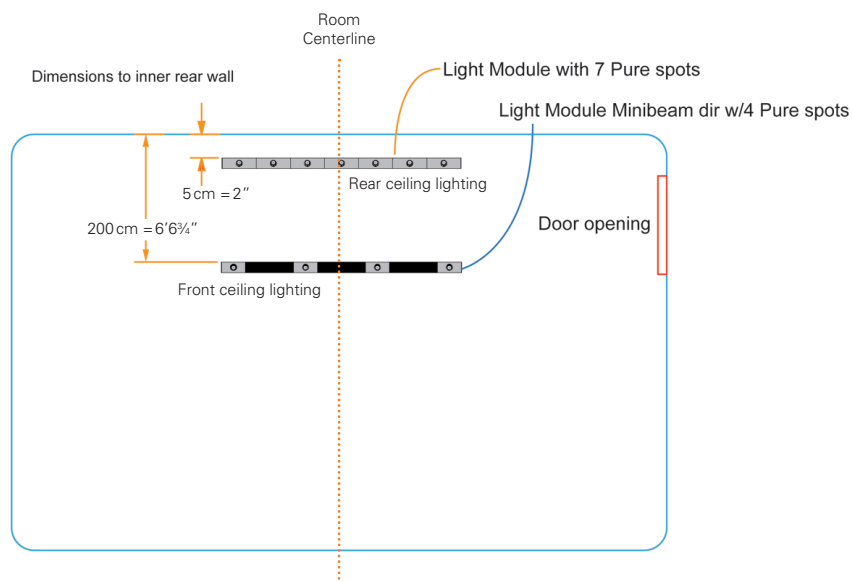


The four spotlights and the three fluorescent lights are physically fastened together with two M4x40 screws and knurled plastic nuts.



Use the chrome plates to cap off the ends of the far right and far left spotlight boxes in the two rows of lights.

ROOM INSTALLATION GUIDE MAIN LIGHTING



Adjusting the angles

